



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/629,979	07/30/2003	Alfred Hardy Sullivan JR.	C&A024U	9505
32047	7590	02/24/2006	EXAMINER	
GROSSMAN, TUCKER, PERREAULT & PFLEGER, PLLC 55 SOUTH COMMERCIAL STREET MANCHESTER, NH 03101			STAICOVICI, STEFAN	
			ART UNIT	PAPER NUMBER
			1732	

DATE MAILED: 02/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/629,979	SULLIVAN ET AL.	
	Examiner	Art Unit	
	Stefan Staicovici	1732	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 09 February 2006.
 2a) This action is **FINAL**. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 18 and 21-25 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) Claim(s) _____ is/are allowed.
 6) Claim(s) 18, 21-25 is/are rejected.
 7) Claim(s) _____ is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) Notice of References Cited (PTO-892)
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
 Paper No(s)/Mail Date _____.

4) Interview Summary (PTO-413)
 Paper No(s)/Mail Date. _____.
 5) Notice of Informal Patent Application (PTO-152)
 6) Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on February 9, 2006 has been entered.

Response to Amendment

2. Applicants' amendment filed February 9, 2006 has been entered. Claims 18 and 21-25 are pending in the instant application.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gill *et al.* (US Patent No. 5,124,368) in view of JP 02-143842.

Gill *et al.* ('368) teach the basic claimed process for forming a trim panel including, providing a laminate having a fabric with a polyurethane foam layer backing, placing said

laminate in a mold and injecting a foam (molded plastic substrate) onto said laminate without the need of an additional barrier layer (see col. 3, lines 11-38 and col. 15, lines 43-44).

Regarding claim 18, although Gill *et al.* ('368) teach a cloth having a polyurethane foam layer backing, Gill *et al.* ('368) do not teach that said polyurethane backing is a polyurethane dispersion that is applied without the use of adhesives or flame lamination. JP 02-143842 teaches using a polyurethane dispersion to form a cushioning/vibration damping panel without using adhesives. Therefore, it would have been obvious for one of ordinary skill in the art to have provided the polyurethane dispersion without using adhesives as taught by JP 02-143842 to form a foam layer in the process of Gill *et al.* ('368) because, JP 02-143842 teaches that said polyurethane dispersion provides for obtaining a low cost cushioning/vibration product, hence providing for an improved product and also because both reference solve the problem of providing improved cushioning/vibration characteristics. It is submitted that the purpose of the polyurethane dispersion foam layer in the process of Gill *et al.* ('368) in view of JP 02-143842 is to avoid any strike-through of the injected foam, hence it is submitted that said polyurethane dispersion foam layer does not allow strike-through of the injected foam in order for the invention of Gill *et al.* ('368) in view of JP 02-143842 to function as described.

5. Claim 18 and 23-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gill *et al.* (US Patent No. 5,124,368) in view of Gribble *et al.* (US 2004/0109992).

Gill *et al.* ('368) teach the basic claimed process for forming a trim panel including, providing a laminate having a fabric with a polyurethane foam layer backing, placing said laminate in a mold and injecting a foam (molded plastic substrate) onto said laminate without

the need of an additional barrier layer (see col. 3, lines 11-38 and col. 15, lines 43-44).

Regarding claims 18 and 23-24, although Gill *et al.* ('368) teach a cloth having a polyurethane foam layer backing, Gill *et al.* ('368) do not teach that said polyurethane backing is a polyurethane dispersion that is applied without the use of adhesives or flame lamination. Gribble *et al.* (US 2004/0109992) teach a process for forming products for vehicle interiors, such as a seat cushion or a headrest, including providing a fabric substrate (cloth), applying a polyurethane dispersion that adheres to said fabric without the need of adhesives or flame lamination and heating said polyurethane dispersion to form a foam backing layer having a density of 0.035-0.16 kg/m³ and a thickness of 3.6 mm (see Abstract and, paragraphs [0002], [0012] and [0071]). Therefore, it would have been obvious for one of ordinary skill in the art to have provided the polyurethane dispersion without using adhesives or flame lamination as taught by Gribble *et al.* (US 2004/0109992) to form a foam layer in the process of Gill *et al.* ('368) because, Gribble *et al.* (US 2004/0109992) teaches that said polyurethane dispersion provides for an improved process for making foam composites by eliminating the need of flame lamination or adhesives. It is submitted that the purpose of the polyurethane dispersion foam layer in the process of Gill *et al.* ('368) in view of Gribble *et al.* (US 2004/0109992) is to avoid any strike-through of the injected foam, hence it is submitted that said polyurethane dispersion foam layer does not allow strike-through of the injected foam in order for the invention of Gill *et al.* ('368) in view of Gribble *et al.* (US 2004/0109992) to function as described.

6. Claims 21 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gill *et al.* (US Patent No. 5,124,368) in view of Gribble *et al.* (US 2004/0109992) and in further view of Ogawa *et al.* (US Patent No. 5,460,873).

Gill *et al.* ('368) in view of Gribble *et al.* (US 2004/0109992) teach the basic claimed process as described above.

Regarding claims 21 and 22, although Gill *et al.* ('368) in view of Gribble *et al.* (US 2004/0109992) teaches using a fabric, Gill *et al.* ('368) in view of Gribble *et al.* (US 2004/0109992) does not specifically teach a woven or a knitted fabric. However, the use of a woven or a knitted fabric in making foam composites is well known as evidenced by Ogawa *et al.* ('873) who teach the use of a polyurethane latex foam coated woven or knitted fabric (see col. 3, lines 23-28 and 35-36) in making foam composites (see page Abstract; col. 1, lines 5-15; Figure3). Therefore, it would have been obvious for one of ordinary skill in the art to have provided a woven or a knitted fabric as taught by Ogawa *et al.* ('873) in the process of Gill *et al.* ('368) in view of Gribble *et al.* (US 2004/0109992) because, Ogawa *et al.* ('873) specifically teaches that a woven or knitted fabric provides for a comfortable feel, hence providing for an improved product and also because all references teach similar end-products, hence suggesting the use of similar materials.

7. Claims 21 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gill *et al.* (US Patent No. 5,124,368) in view of JP 02-143842 and in further view of Ogawa *et al.* (US Patent No. 5,460,873).

Gill *et al.* ('368) in view of JP 02-143842 teach the basic claimed process as described above.

Regarding claims 21 and 22, although Gill *et al.* ('368) in view of JP 02-143842 teaches using a fabric, Gill *et al.* ('368) in view of JP 02-143842 does not specifically teach a woven or a knitted fabric. However, the use of a woven or a knitted fabric in making foam composites is well known as evidenced by Ogawa *et al.* ('873) who teach the use of a polyurethane latex foam coated woven or knitted fabric (see col. 3, lines 23-28 and 35-36) in making foam composites (see page Abstract; col. 1, lines 5-15; Figure3). Therefore, it would have been obvious for one of ordinary skill in the art to have provided a woven or a knitted fabric as taught by Ogawa *et al.* ('873) in the process of Gill *et al.* ('368) in view of JP 02-143842 because, Ogawa *et al.* ('873) specifically teaches that a woven or knitted fabric provides for a comfortable feel, hence providing for an improved product and also because all references teach similar end-products, hence suggesting the use of similar materials.

8. Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gill *et al.* (US Patent No. 5,124,368) in view of JP 02-143842 and in further view of EP 0 361 856 A2.

Gill *et al.* ('368) in view of JP 02-143842 teaches the basic claimed process as described above.

Regarding claim 25, although Gill *et al.* ('368) in view of JP 02-143842 teach a fabric, Gill *et al.* ('368) in view of JP 02-143842 do not teach a fabric having a specific weight of 100-950 g/m². It is noted that Gill *et al.* ('368) in view of JP 02-143842 teach a process for making trim covers. EP 0 361 856 A2 teaches that the fabric for making a seat cover (trim cover) has a

weight of at least 380 g/m² (see Abstract). Therefore, it would have been obvious for one of ordinary skill in the art to have provided a fabric having a weight of 380 g/m² as taught by EP 0 361 856 A2 to make the trim cover by the process of Gill *et al.* ('368) in view of JP 02-143842 because, EP 0 361 856 A2 teaches that such a fabric provides for superior abrasion and snag resistance, hence providing for an improved product and also because all references teach similar end-products, hence suggesting similar materials and desired properties.

9. Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gill *et al.* (US Patent No. 5,124,368) in view of Gribble *et al.* (US 2004/0109992) and in further view of EP 0 361 856 A2.

Gill *et al.* ('368) in view of Gribble *et al.* (US 2004/0109992) teaches the basic claimed process as described above.

Regarding claim 25, although Gill *et al.* ('368) in view of Gribble *et al.* (US 2004/0109992) teach a fabric, Gill *et al.* ('368) in view of Gribble *et al.* (US 2004/0109992) do not teach a fabric having a specific weight of 100-950 g/m². It is noted that Gill *et al.* ('368) in view of Gribble *et al.* (US 2004/0109992) teach a process for making trim covers. EP 0 361 856 A2 teaches that the fabric for making a seat cover (trim cover) has a weight of at least 380 g/m² (see Abstract). Therefore, it would have been obvious for one of ordinary skill in the art to have provided a fabric having a weight of 380 g/m² as taught by EP 0 361 856 A2 to make the trim cover by the process of Gill *et al.* ('368) in view of Gribble *et al.* (US 2004/0109992) because, EP 0 361 856 A2 teaches that such a fabric provides for superior abrasion and snag resistance,

hence providing for an improved product and also because all references teach similar end-products, hence suggesting similar materials and desired properties

10. Claims 18 and 23-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gribble *et al.* (US 2004/0109992) in view of Applicants' Admitted Prior Art (APA).

Gribble *et al.* (US 2004/0109992) teach the basic claimed process for forming products for vehicle interiors, such as a seat cushion or a headrest, including providing a fabric substrate (cloth), applying a polyurethane dispersion that adheres to said fabric without the need of adhesives or flame lamination and heating said polyurethane dispersion to form a foam backing layer having a density of 0.035-0.16 kg/m³ and a thickness of 3.6 mm (see Abstract and, paragraphs [0002], [0012] and [0071]). Further, Gribble *et al.* (US 2004/0109992) teach hot lamination molding of a polyethylene film (plastic substrate) directly to said foam-backing layer without the need of a non-permeable layer (see paragraphs [0007] and [0011]).

Regarding claim 18, although Gribble *et al.* (US 2004/0109992) teach laminating a polymeric film to said foam backed fabric, Gribble *et al.* (US 2004/0109992) does not teach injection molding a plastic layer to said foam backed fabric. However, injection molding a plastic substrate, such as a foam layer onto a coated fabric is well known as evidenced by APA, who teach injection molding a foam layer to a laminated fabric in order to make products for a vehicle interior such as a seat cushion or an upholstery trim panel (see page 1, lines 24-27). Further, APA teaches that said laminated fabric includes a latex coated fabric, wherein the purpose of said latex coating is to avoid strike-through of the injection molded foam through the fabric layer (see page 1, line 27 through page 2, line 3). Therefore, it would have been

obvious for one of ordinary skill in the art to have injection molded a plastic substrate as taught by APA against said foam backed fabric in the process of Gribble *et al.* (US 2004/0109992) because, APA specifically teaches that such a process allows for forming a variety of useful products, hence providing for a more versatile and economical process for making automotive trim panels by forming the plastic substrate and molding the fabric in a single step process and, also because of its well know status. Further, it is submitted that the purpose of the polyurethane dispersion foam layer in the process of Gribble *et al.* (US 2004/0109992) in view of APA is to avoid any strike-through of the injected foam, hence it is submitted that said polyurethane dispersion foam layer does not allow strike-through of the injected foam in order for the invention of Gribble *et al.* (US 2004/0109992) in view of APA to function as described.

In regard to claims 23 and 24, Gribble *et al.* (US 2004/0109992) teach that said polyurethane dispersion foam backing layer has a density of 0.035-0.16 kg/m³ and a thickness of 3.6 mm (see Abstract and, paragraphs [0002], [0012] and [0071]).

11. Claims 18 and 21-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gribble *et al.* (US 2004/0109992) in view of Ogawa *et al.* (US Patent No. 5,460,873).

Gribble *et al.* (US 2004/0109992) teach the basic claimed process for forming products for vehicle interiors, such as a seat cushion or a headrest, including providing a fabric substrate (cloth), applying a polyurethane dispersion that adheres to said fabric without the need of adhesives or flame lamination and heating said polyurethane dispersion to form a foam backing layer having a density of 0.035-0.16 kg/m³ and a thickness of 3.6 mm (see Abstract and, paragraphs [0002], [0012] and [0071]). Further, Gribble *et al.* (US 2004/0109992) teach hot

lamination molding of a polyethylene film (plastic substrate) directly to said foam-backing layer without the need of a non-permeable layer (see paragraphs [0007] and [0011]).

Regarding claim 18, although Gribble *et al.* (US 2004/0109992) teach laminating a polymeric film to said foam backed fabric, Gribble *et al.* (US 2004/0109992) does not teach injection molding a plastic layer to said foam backed fabric. However, injection molding a plastic substrate, such as a foam layer onto a foam coated fabric is well known as evidenced by Ogawa *et al.* ('873) who teach injection molding a foam layer to a polyurethane latex foam coated fabric (see col. 3, lines 35-36) in order to make products for a vehicle interior such as a seat cushion or a headrest (see page Abstract; col. 1, lines 5-15; Figure3). Further, Ogawa *et al.* ('873) teaches that the purpose of said polyurethane latex foam coating is to avoid strike-through of the injection molded foam through the fabric layer (see col. 2, lines 32-40). Therefore, it would have been obvious for one of ordinary skill in the art to have injection molded a plastic foam substrate as taught by Ogawa *et al.* ('873) against said foam backed fabric in the process of Gribble *et al.* (US 2004/0109992) because, Ogawa *et al.* ('873) specifically teaches that such a process allows for forming a variety of useful products, hence providing for a more versatile and economical process for making automotive trim panels by forming the plastic substrate and molding the fabric in a single step process and, also because of its well known status. Further, it is submitted that the purpose of the polyurethane dispersion foam layer in the process of Gribble *et al.* (US 2004/0109992) in view of Ogawa *et al.* ('873) is to avoid any strike-through of the injected foam, hence it is submitted that said polyurethane dispersion foam layer does not allow strike-through of the injected foam in order for the

invention of Gribble *et al.* (US 2004/0109992) in view of Ogawa *et al.* ('873) to function as described. Furthermore, it is noted that both Gribble *et al.* (US 2004/0109992) and Ogawa *et al.* ('873) teach a fabric having a polyurethane-based foam coating.

In regard to claims 21 and 22, although Gribble *et al.* (US 2004/0109992) teaches using a fabric in making products for vehicle interiors, such as a seat cushion or a headrest (see paragraph [0002]), Gribble *et al.* (US 2004/0109992) does not specifically teach a woven or a knitted fabric. However, the use of a woven or a knitted fabric in making products for vehicle interiors, such as a seat cushion or a headrest is well known as evidenced by Ogawa *et al.* ('873) who teach the use of a polyurethane latex foam coated woven or knitted fabric (see col. 3, lines 23-28 and 35-36) in making products for a vehicle interior such as a seat cushion or a headrest (see page Abstract; col. 1, lines 5-15; Figure3). Therefore, it would have been obvious for one of ordinary skill in the art to have provided a woven or a knitted fabric as taught by Ogawa *et al.* ('873) in the process of Gribble *et al.* (US 2004/0109992) because, Ogawa *et al.* ('873) specifically teaches that a woven or knitted fabric provides for a comfortable feel, hence providing for an improved product and also because, both references teach similar end-products, hence suggesting the use of similar materials.

In regard to claims 23 and 24, Gribble *et al.* (US 2004/0109992) teach that said polyurethane dispersion foam backing layer has a density of 0.035-0.16 kg/m³ and a thickness of 3.6 mm (see Abstract and, paragraphs [0002], [0012] and [0071]).

12. Claims 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gribble *et al.* (US 2004/0109992) in view of Applicants' Admitted Prior Art (APA) and in further view of EP 0 361 856 A2.

Gribble *et al.* (US 2004/0109992) in view of APA teaches the basic claimed process as described above.

Regarding claim 25, although Gribble *et al.* (US 2004/0109992) in view of APA teach a fabric, Gribble *et al.* (US 2004/0109992) in view of APA do not teach a fabric having a specific weight of 100-950 g/m². It is noted that Gribble *et al.* (US 2004/0109992) in view of APA teach a process for making products for vehicle interiors, such as a seat cushion. EP 0 361 856 A2 teaches that the fabric for making a seat cover has a weight of at least 380 g/m² (see Abstract). Therefore, it would have been obvious for one of ordinary skill in the art to have provided a fabric having a weight of 380 g/m² as taught by EP 0 361 856 A2 to make the seat cushion by the process of Gribble *et al.* (US 2004/0109992) in view of APA because, EP 0 361 856 A2 teaches that such a fabric provides for superior abrasion and snag resistance, hence providing for an improved product and also because all references teach similar end-products, hence suggesting similar materials and desired properties.

13. Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gribble *et al.* (US 2004/0109992) in view of Ogawa *et al.* (US Patent No. 5,460,873) and in further view of EP 0 361 856 A2.

Gribble *et al.* (US 2004/0109992) in view of Ogawa *et al.* ('873) teaches the basic claimed process as described above.

Regarding claim 25, although Gribble *et al.* (US 2004/0109992) in view of Ogawa *et al.* ('873) teach a fabric, Gribble *et al.* (US 2004/0109992) in view of Ogawa *et al.* ('873) do not teach a fabric having a specific weight of 100-950 g/m². It is noted that Gribble *et al.* (US 2004/0109992) in view of Ogawa *et al.* ('873) teach a process for making products for vehicle interiors, such as a seat cushion. EP 0 361 856 A2 teaches that the fabric for making a seat cover has a weight of at least 380 g/m² (see Abstract). Therefore, it would have been obvious for one of ordinary skill in the art to have provided a fabric having a weight of 380 g/m² as taught by EP 0 361 856 A2 to make the seat cushion by the process of Gribble *et al.* (US 2004/0109992) in view of Ogawa *et al.* ('873) because, EP 0 361 856 A2 teaches that such a fabric provides for superior abrasion and snag resistance, hence providing for an improved product and also because all references teach similar end-products, hence suggesting similar materials and desired properties.

Response to Arguments

14. Applicants' arguments filed February 9, 2006 have been considered.
15. Applicants argue that the art of record does not teach or suggest, either alone or in combination, a method that includes "injection molding behind the dispersion layer" (see page 7 of the amendment filed 2/9/2006). However, this argument is drawn to a newly presented claim limitation not previously presented that has been rejected in this Office Action as set forth above.

Conclusion

16. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.
17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stefan Staicovici, Ph.D. whose telephone number is (571) 272-1208. The examiner can normally be reached on Monday-Friday 9:30 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael P. Colaianni, can be reached on (571) 272-1196. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Stefan Staicovici, PhD



Primary Examiner

2/17/06

AU 1732

February 17, 2006